

REMARKS

Claims 1-5 have been examined and have been rejected under 35 U.S.C. § 112, second paragraph, as well as under 35 U.S.C. § 102(b).

I. Preliminary Matters

The Examiner has objected to claims 1-5 due to minor informalities. Accordingly, Applicant has amended the claims in a manner believed to overcome the objection. In regard to the “subtraction result” objection of claim 3, the Examiner maintains that the same error occurs in claim 4. However, it is Applicant’s understanding that claim 4 does not require the same correction as claim 3 in this regard.

Also, Applicant filed an Information Disclosure Statement on January 10, 2005, which was after the mailing date of the current Office Action. Applicant respectfully requests the Examiner to provide an initialed PTO 1449 form with the next Office Action.

Finally, Applicant has amended pg. 2 of the specification to correct a minor error.

II. Rejections under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 1-5 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Accordingly, Applicant has amended the claims in a manner believed to overcome the rejection.

III. Rejections under 35 U.S.C. § 102(b)

The Examiner has rejected claims 1-5 under 35 U.S.C. § 102(b) as allegedly being unpatentable over U.S. Patent No. 4,521,867 to Kasuga (“Kasuga”).

A. Claim 1

Applicant submits that claim 1 is patentable over the cited reference. For example, claim 1 recites that a sampling frequency is set to six times as large as a central frequency of a passing frequency band.

The Examiner refers to Fig. 1b of Kasuga as disclosing the above feature. However, in the portion of Kasuga cited by the Examiner, i.e., col. 1, lines 44-47 and 60-65, the reference fails to teach or suggest that a sampling frequency is set to six times a central frequency of a passing frequency band. Further, in column 2, Kasuga discloses values for the IIR digital filter of Fig. 1a. Such values, however, likewise fail to teach or suggest the claimed comparison. In particular, Kasuga discloses that a center frequency equals 20 Hz and a sampling frequency equals 44.0569 kHz (col. 2, lines 7-9). The given sampling frequency is not six times as large as the center frequency.

Claim 1 also recites that a first-order input feedback coefficient b_1 is set at $-1 + 2^{-n}$, and a second-order input feedback coefficient b_2 is set at $1 - 2^{-(n-1)}$, where n is an odd number of 3 or larger.

The Examiner refers to columns 1 and 4 of Kasuga, and maintains that all the coefficients are less than 1 or within the circle for stabilizing the filter (pg. 4 of Office Action). However, in

Kasuga, the specific weighting factors, etc., provided in column 4 do not disclose the specific formulas recited in claim 1. In particular, no specific values are provided for each of the variables in Kasuga, such that the reference anticipates the specific formulas recited in the claims. Further, even if Applicant assumes *arguendo* that the weighting factors a_K and b_K in column 4 of Kasuga disclose the claimed coefficients b_1 and b_2 , the reference still fails to teach or suggest that n equals an odd number of 3 or larger, as recited in claim 1. For example, in the formulas set forth in col. 4, lines 4-6 of Kasuga, the even number of 2 is already provided (such that it is not an odd number of 3 or larger).

Based on the foregoing, Applicant submits that claim 1 is patentable over the cited reference.

B. Claims 2 and 3

Since claim 2 has been canceled, without prejudice or disclaimer, Applicant submits that the rejection of such claim is now moot.

Since claim 3 is dependent upon claim 1, Applicant submits that such claim is patentable at least by virtue of its dependency.

C. Claims 4 and 5

Since claims 4 and 5 contain features that are analogous to the features recited in claim 1, Applicant submits that claims 4 and 5 are patentable for at least analogous reasons as set forth above.

Amendment under 37 C.F.R. § 1.111
U.S. Application No. 09/822,374

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

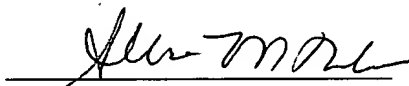
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Date: March 3, 2005